

Amendment and Response  
Applicants: Garland L. Segner et al.  
Serial No.: 10/632,145

Attorney Docket: EV31008US

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A guide wire comprising:  
an elongate, flexible core having a proximal region, a proximal end, a distal region, and a distal end, and the distal region having a tapered portion;  
a single coil comprising a plurality of wire strands wrapped helically parallel to one another and disposed on at least a portion of the tapered distal region of the core;  
a polymer tie layer disposed on at least a portion of the plurality of wire strands; and  
a lubricious polymer layer disposed on the polymer tie layer.
2. (Original) A guide wire of claim 1, wherein the polymer tie layer is disposed on the entire distal end of the guide wire.
3. (Withdrawn) A guide wire of claim 1, wherein the guide wire further comprises a coil disposed at the distal end.
4. (Withdrawn) A guide wire of claim 3, wherein at least a portion of the coil is not covered by the polymer tie layer.
5. (Withdrawn) A guide wire of claim 1, wherein the guide wire further comprises a radiopaque tip disposed at the distal end.

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6. (Withdrawn) A guide wire of claim 5, wherein the radiopaque tip comprises a polymer containing radiopaque material.
7. (Original) A guide wire of claim 1, wherein the polymer tie layer provides the only form of attachment between the plurality of wire strands and the core.
8. (Original) A guide wire of claim 1, wherein the plurality of wire strands are attached to the core by one or more solders, welds, swaging tubes, or adhesives.
9. (Original) A guide wire of claim 1, wherein the guide wire has a distal end and the core extends to the distal end of the guide wire.
10. (Withdrawn) A guide wire of claim 1, wherein the guide wire has a distal end and the core does not extend to the distal end of the guide wire.
11. (Withdrawn) A guide wire of claim 1, wherein the plurality of wire strands has a distal end and the core extends past the distal end of the plurality of wire strands.
12. (Original) A guide wire of claim 1, wherein the length of the guide wire is from 30 to 350 cm.
13. (Original) A guide wire of claim 1, wherein the length of the guide wire is from 150 to 320 cm.

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14. (Original) A guide wire of claim 1, wherein the guide wire has an outer diameter of from 0.005 to 0.038 inch.

15. (Original) A guide wire of claim 1, wherein the guide wire comprises 3 to 24 wire strands.

16. (Withdrawn) A guide wire of claim 1, wherein the guide wire comprises 5 to 8 wire strands.

17. (Original) A guide wire of claim 1, wherein the wires forming the plurality of wire strands have lengths of from 1 to 80 cm.

18. (Original) A guide wire of claim 1, wherein the wires forming the plurality of wire strands have outer diameters of from 0.001 to 0.010 inch.

19. (Original) A guide wire of claim 1, wherein the tapered distal region of the core has a length of from 5 to 80 cm.

20. (Original) A guide wire of claim 1, wherein the plurality of wire strands wrapped helically parallel to one another form a stranded tubular structure having a longitudinal central axis, and wherein at least a portion of the tapered distal region of the core is disposed within the stranded tubular structure.

21. (Original) A guide wire of claim 20, wherein the angle between the wire strands and the central longitudinal axis is from 10 to 45 degrees.

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22. (Withdrawn) A guide wire of claim 21, wherein the angle between the wire strands and the central longitudinal axis is from 15 to 30 degrees.

23. (Withdrawn) A guide wire of claim 20, wherein the entire core is disposed within the stranded tubular structure.

24. (Currently amended) A guide wire comprising:  
an elongate, flexible core having a proximal region, a proximal end, a distal region, and a distal end, and the distal region having a tapered portion;  
a single coil comprising a plurality of wire strands wrapped helically parallel to one another and disposed on at least a portion of the tapered distal region of the core; and  
a polymer tie layer disposed on at least a portion of the plurality of wire strands,  
wherein the polymer tie layer provides the only form of attachment between the plurality of wire strands and the core.

25. (Original) A guide wire of claim 24, wherein the polymer tie layer is disposed on the entire distal end of the guide wire.

26. (Withdrawn) A guide wire of claim 24, wherein the guide wire further comprises a coil disposed at the distal end.

27. (Withdrawn) A guide wire of claim 26, wherein at least a portion of the coil is not covered by the polymer tie layer.

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28. (Withdrawn) A guide wire of claim 24, wherein the guide wire further comprises a radiopaque tip disposed at the distal end.

29. (Withdrawn) A guide wire of claim 28, wherein the radiopaque tip comprises a polymer containing radiopaque material.

30. (Original) A guide wire of claim 24, wherein the guide wire has a distal end and the core extends to the distal end of the guide wire.

31. (Withdrawn) A guide wire of claim 24, wherein the guide wire has a distal end and the core does not extend to the distal end of the guide wire.

32. (Withdrawn) A guide wire of claim 24, wherein the plurality of wire strands has a distal end and the core extends past the distal end of the plurality of wire strands.

33. (Original) A guide wire of claim 24, wherein the length of the guide wire is from 30 to 350 cm.

34. (Original) A guide wire of claim 24, wherein the length of the guide wire is from 150 to 320 cm.

35. (Original) A guide wire of claim 24, wherein the guide wire has an outer diameter of from 0.005 to 0.038 inch.

36. (Original) A guide wire of claim 24, wherein the guide wire comprises 3 to 24 wire strands.

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37. (Withdrawn) A guide wire of claim 24, wherein the guide wire comprises 5 to 8 wire strands.

38. (Original) A guide wire of claim 24, wherein the wires forming the plurality of wire strands have lengths of from 1 to 80 cm.

39. (Original) A guide wire of claim 24, wherein the wires forming the plurality of wire strands have outer diameters of from 0.001 to 0.010 inch.

40. (Original) A guide wire of claim 24, wherein the tapered distal region of the core has a length of from 5 to 80 cm.

41. (Original) A guide wire of claim 24, wherein the plurality of wire strands wrapped helically parallel to one another form a stranded tubular structure having a longitudinal central axis, and wherein at least a portion of the tapered distal region of the core is disposed within the stranded tubular structure.

42. (Original) A guide wire of claim 41, wherein the angle between the wire strands and the central longitudinal axis is from 10 to 45 degrees.

43. (Withdrawn) A guide wire of claim 42, wherein the angle between the wire strands and the central longitudinal axis is from 15 to 30 degrees.

44. (Withdrawn) A guide wire of claim 41, wherein the entire core is disposed within the stranded tubular structure.

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45. (Withdrawn, currently amended) A guide wire comprising:  
an elongate, flexible core having a proximal region, a proximal end, a distal region, and a distal end, the distal region having a tapered portion, and the tapering region terminating in an enlarged diameter portion;

a single coil comprising a plurality of wire strands wrapped helically parallel to one another and disposed on at least a portion of the tapered distal region of the core;

a polymer tie layer disposed on at least a portion of the plurality of wire strands; and

a lubricious polymer layer disposed on the polymer tie layer.

46. (Withdrawn, currently amended) A guide wire comprising:  
an elongate, flexible core having a proximal region, a proximal end, a distal region, and a distal end, and the distal region having a tapered portion;

a single coil comprising a plurality of wire strands wrapped helically parallel to one another and disposed on at least a portion of the tapered distal region of the core; and

a polymer tie layer disposed on at least a portion of the plurality of wire strands,

wherein the core comprises at least two separate members.

47. (Withdrawn) A guide wire of claim 46, wherein at least two of the separate members overlap.

48. (Currently amended) A guide wire comprising:  
an elongate, flexible core having a proximal region, a proximal end, a distal region, and a distal end;

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a single coil comprising a plurality of wire strands wrapped helically parallel to one another and disposed distal to the distal end of the elongate, flexible core; and

a polymer tie layer disposed on at least a portion of the plurality of wire strands and at least a portion of the elongate, flexible core.

49. (Withdrawn, currently amended) A guide wire comprising:  
an elongate, flexible core having a proximal region, a proximal end, a distal region, and a distal end, and the distal region having a tapered portion;

a single coil comprising a plurality of wire strands wrapped helically parallel to one another and disposed on the core, and

wherein the plurality of wire strands wrapped helically parallel to one another form a stranded tubular structure having a longitudinal central axis, and wherein the entire core is disposed within the stranded tubular structure.